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Is the Value Spread a Good Predictor of Stock Returns? UK Evidence

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Abstract

This paper explores the predictive ability of the value spread in the UK. I replicate the US analysis of Liu and Zhang (2007) using UK data. In addition, I extend their work by exploring the predictive ability of the book-to-market, market-to-book and value spread on other size and value investment strategies, namely: large-caps only; small-caps minus large-caps (SML); value stocks only; growth stocks only; value stocks minus growth stocks (VMG) and a market portfolio that includes all stocks. The results are consistent with Liu and Zhang (2007) on the value spread**.** The value spread shows no predictive power for portfolio returns. Therefore, I show that the predictive power of book-to-market and market-to-book spreads depend on the portfolio formation strategies and the relative proportion of small-cap, large-cap, value and growth stocks in the portfolio.

Keywords: Fama and French, asset pricing, cross section of expected returns, book-to-market, size

JEL Classification: G11, G12, G15

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1. INTRODUCTION

An extensive literature has explored the magnitude of the value premium in the US since the value versus glamour 'anomaly' was report by Rosenberg, Reid, and Lanstein (1985) and later by Lakonishok, Shleifer and Vishny (1994). Their initial study was followed by Fama and French (1993, 1995, 1996) who suggested that value stocks deliver higher returns because they are fundamentally riskier. They argued that their three factor model extends the Capital Asset Pricing Model (CAPM) to model financial distress risks that the simple CAPM does not pick up. The two additional risk factors that Fama and French included were: (i) the difference between the return on a portfolio of small stocks and the return on a portfolio of large stocks (SMB); (ii) the difference between the return on a portfolio of stocks with a high book-to-market ratio and the return on a portfolio of stocks with a low book-to-market ratio (HML).

Daniel and Titman (1997) found that firm characteristics (i.e., size and book-to-market) explained returns better than the factor loadings used in the Fama and French model. However, Davies, Fama and French (2000) argued that Daniel and Titman's results were subsample-specific. The following additional explanations have subsequently been suggested: risk factors contain information about future growth in gross domestic product (Liew and Vassalou, 2000); proxies for liquidity risk (Liu, 2006); the value premium reflects greater cash flow risk in value stocks in conjunction to the discount rate risk which is greater in growth stocks on an aggregate level (Campbell and Vuolteenaho, 2004).

Growth stocks should be riskier than value stocks as their returns depend on future events. But what happens when examining in greater details the characteristics of growth and value stocks? Zhang (2005) argues that value stocks have high values of assets in place, whereas growth stocks have low values of assets. He demonstrates that assets in place are riskier than growth options, especially during adverse market conditions.

He also introduces the term *costly reversibility*, where he argues that the costs of contracting assets are larger than the costs of expanding assets. He shows that value firms face bigger obstacles when reducing capital stock in recessions than growth firms. As a result, value firms are much riskier than growth firms in adverse market conditions, when the price of risk is high. In good times, value firms do not have to reinvest in new capital, whereas growth firms need to reinvest in new capital. Consequently, during economic booms, when the price of risk is low, value and growth stocks exhibit similar risk however, value stocks could be marginally less risky than growth stocks. Overall, Zhang (2005) argues that costly reversibility and the countercyclical price of risk are important factors that cause value firms to be riskier than growth firms, particularly during adverse market conditions. Similarly, Lettau and Ludvigson (2001) find that value portfolios have higher consumption betas in bad times than in good times while the opposite is true for growth portfolios.

However, in the UK, Gregory, Harris and Michou (2003) find that the value premium based on the book-to-market ratio is not positively correlated with either consumption growth or investment growth. They conclude, therefore, that the book-to-market effect is inconsistent with a rational risk pricing story. Moreover, Hung, Shackleton and Xu (2004) find that value stocks provide higher returns than growth stocks in both up and down markets.

The mechanism of Zhang (2005) that motivated Liu and Zhang (2007) also drives the analysis of Petkova and Zhang (2005), who study the time-varying risk patterns of value and growth stocks across business cycles. They find that the risk of value strategies is high in adverse market conditions when the expected premium for risk is high and is low in good market conditions when the expected premium for risk is low. They found that value betas are positively correlated to the expected market risk premium while growth betas are negatively correlated. Gulen, Xing, and Zhang (2008) show that the expected value minus growth returns display strong countercyclical variations. The modelling framework of Zhang (2005) is also followed by Li, Livdan, and Zhang (2008) and Livdan, Sapriza and Zhang (2008).

Cohen, Polk and Vuolteenaho (2003) argued that if firms with high book-to-market ratios yielded higher returns than firms with low book-to-market ratios, then the cross-sectional variation in book-to-market ratios should also be related to the cross-sectional variation in future profitability. Their empirical findings showed that the expected returns on value-minus-growth strategies are higher when the spread in book-to-market ratios is wider.

Campbell and Vuolteenaho (2004) argued that returns on the market portfolio have two components; cash flow and discount rate. They suggested breaking up the market beta into two different betas: a cash-flow beta referred to as 'bad beta' and a discount-rate beta referred to as 'good beta', with the former carrying a higher price of risk than the latter. Moreover, they explained that the stock's risk should not be determined by the stock's overall beta with the market but instead by the stocks' 'bad beta' with a secondary impact from its 'good beta'. They attribute the size premium to the finding that small stocks have higher 'bad betas' than large stocks and this can explain their higher average returns.
Liu and Zhang (2007) provided contradictory evidence to Campbell and Vuolteenaho (2004), suggesting that the book-to-market spread and the market-to-book spread predict stock returns but with opposite signs. The value spread appears to have less predictive power as it is positively correlated with cyclical variables such as dividend yield, term premium, default premium and aggregate book-to-market, but negatively correlated with short-term treasury bill rate. On the other hand, they show that the market-to-book spread is negatively correlated with the cyclical variables, but positively correlated with the short-term treasury bill rate.

The main aim of this paper is to re-examine the findings of Cohen et al (2003) on a value-minus-growth investment strategy, and the findings of Liu and Zhang (2007) on a small-cap investment strategy, using UK data. The major contribution of this paper is that it also explores the predictive abilities of these spreads on additional size and value investment strategies, namely: large-cap only; small-cap minus large-cap (SML); value stocks only; growth stocks only; value stocks minus growth stocks (VMG); and a market portfolio that includes all stocks.

My empirical findings are consistent with those of Liu and Zhang (2007) that the value spread shows no predictive power over portfolio returns. This is irrespective of the portfolio formation strategy or the holding period of the portfolio. I also find that although the book-to-market and market-to-book spreads show some predictive power over some portfolio returns, this predictive power does not persist across all portfolio strategies and all investment horizons. Similar results were observed with the introduction of the macroeconomic variables.

The rest of the paper is organised as follows: Section 2 discusses the details of the research method outlined above and the data set used. Section 3 reports the results and Section 4 draws some conclusions from the analysis.

2. DATA AND METHODOLOGY

Data and Sample Selection

The sample used in this study consists of all live and de-listed (due to merger, bankruptcy etc) UK firms listed in the London Stock Exchange. Data for the period between July 1975 and December 2006 was used. Monthly returns data have been extracted from LSPD (London Share Price Database) and yearly accounting data from Datastream with SEDOL number as a common variable to match companies between the two databases. I focus only on common stocks and eliminate companies with negative book-to-market, and companies that belong to the financial sector (banks, insurance companies, investment funds, unit trusts and property companies).

For each stock the following variables were calculated as follows:

Book-to-market (B/M), the ratio of book value to market value. Book value is defined as equity capital and reserves (Datastream accounting item: 305) minus total intangibles assets (Datastream accounting item: 344), whereas market value is the market capitalisation of the company.

Size, the market capitalisation of the company.

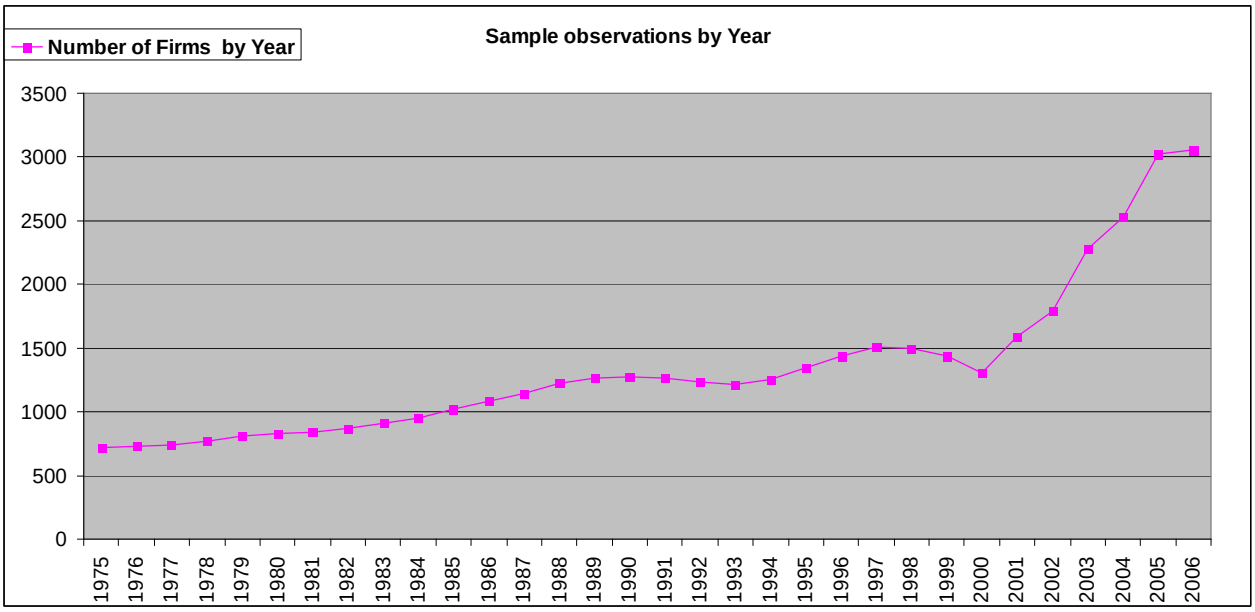
Returns for each company include dividends and adjustments for changes in capital structure.

To observe the cyclical properties of the book-to-market spread and the market-to-book spread, I also examine the cross correlation between the spreads and the variables commonly used to measure aggregate economic conditions such as: the FTSE All-Share dividend yield; the level of industrial production; the treasury bill rate; and the term premium. The term premium is defined as the difference between the yield on a long term UK Government bond (GILT) and the UK Treasury bill rates. These variables have also been extracted from Datastream.

- *FTSE All-Share dividend yield*, denoted DY, is calculated as the sum of the dividend over the previous 12 months divided by the level of index.
- *Industrial production*, denoted IP, is the index designed to measure changes in the level of output in the industrial sector of economy.
- *Term premium*, denoted TERM, is defined as the difference between the yield on a long term UK Government bond (GILT) and the UK Treasury bill rate.
- *Risk free rate*, denoted R*f*, is the UK Treasury Bill rate.

The distribution of firms across the years is described in Figure 1 below.

FIGURE 1



Notes: The year axis represents the year in which returns data are available, e.g 2000 represents the returns data used in that year to construct portfolios from July 2000 to June 2001.

Portfolio Formation

Gregory, Harris and Michou (2001) and Michou, Mouselli and Stark (2007) reviewed different methods used to construct portfolios based on firm-specific characteristics as well as to construct the Fama and French risk factors (HML and SMB) in the UK. Following the methodology of Gregory, Harris and Michou (2001), portfolios are formed in July on an annual basis. In each year *t* of the sample period portfolios include all companies for which the above required accounting variables can be identified on December of year *t-1*, and which have at least one month's return for the year starting at July of year *t*. The six-months lag between the measurement of accounting and return data is to ensure that the accounting data has been made public and that the effect of the public information has been captured in the return.

To create value; growth and value-minus-growth (VMG) portfolios, the entire sample which represents the market portfolio is sorted in ascending order according to the book-to-market ratio. The sample is then divided into ten equal portfolios. The equally-weighted returns for each decile are derived by simply adding up the discrete returns on the individual stocks that make up the decile and then dividing by the number of stocks in the decile. I also report value-weighted returns where each stock is weighted in proportion to its market capitalisation at the date of portfolio formation. Decile 10 represents the value portfolio while decile 1 is the growth portfolio. Value-minus-growth (VMG) is the difference between the value and growth portfolios.

To create the small-cap; large-cap and small-minus-large (SML) portfolios, the market sample is sorted in ascending order this time according to the companies' market capitalisation. Again, the sample is divided into ten equal deciles. The equally-weighted and value-weighted returns for the deciles are calculated following the same steps as for the value and growth portfolios above. Decile 1 represents the small-cap portfolio while decile 10 is the large-cap portfolio. Small-minus-large (SML) is the difference between the small-cap and large-cap portfolios.

Average book-to-market ratios, average market-to-book ratios and average log book-to-market ratios for the growth stocks (decile 1) and value stocks (decile 10) are also calculated.

The different portfolio returns are defined as follows:

Small-cap returns: returns on a long position on the smallest ten per cent of the market ranked by market capitalisation.

Large-cap returns: returns on a long position on the largest ten per cent of the market ranked by market capitalisation.

Small minus large (SML): the small-cap portfolio returns less the large-cap portfolio returns. Here the portfolio is assumed to be long on small-caps and short on large-caps.

Value returns: returns on a long position on the largest ten per cent of the market ranked by book-to-market value.

Growth returns: returns on a long position on the smallest ten per cent of the market ranked by book-to-market value.

Value minus growth (VMG): the value stocks portfolio returns less the growth stocks portfolio returns. Here the portfolio is assumed to be long on value stocks and short on growth stocks.

Market returns: returns on a long position on the entire market sample

The definition of spreads follows Liu and Zhang (2007):

Book-to-market spread: The average book-to-market ratio of value stocks minus the average book-to-market ratio of growth stocks.

Market-to-book spread: The average market-to-book ratio of growth stocks minus the average market-to-book ratio of value stocks.

Value spread: The average log book-to-market ratio of value stocks minus the average log book-to-market ratio of growth stocks.

This paper contains an investigation of whether or not the returns on portfolio strategies can be predicted using the spreads between company book-to-market and market-to-book ratios. Therefore the following hypotheses are tested:

H_1: *The book-to-market spread can predict future returns on*: market portfolio; small-cap portfolio; large-cap portfolio; portfolio long on small-cap and short on large-cap; value stock portfolio; growth stock only portfolio; portfolio long on value stocks and short on growth stocks.

H_2: *The market-to-book spread can predict future returns on* market portfolio; small-cap portfolio; large-cap portfolio; portfolio long on small-cap and short on large-cap; value stock portfolio; growth stock only portfolio; portfolio long on value stocks and short on growth stocks.

H_3: *The value spread can predict future returns on:* market portfolio; small-cap portfolio; large-cap portfolio; portfolio long on small-cap and short on large-cap; value stock portfolio; growth stock only portfolio; portfolio long on value stocks and short on growth stocks.

Panel A of Table 1 reports the summary statistics including the mean, median, minimum, maximum and standard deviations of the book-to-market spread, market-to-book spread and value spread, as well as equally-weighted (ew) and value-weighted (vw) returns of all possible investment strategies portfolios. Panel B of table 1 shows the cross correlations for the 1975-2006 sample. All spreads (the book-to-market spread and the market-to-book and the value spread) show a negative correlation with the conditioning variables: FTSE dividend yield; Treasury bill rate; and term premium. They show a positive correlation with industrial production.

Table 1: Summary Statistics (1975-2006)

Table 1 reports the descriptive statistics of the book-to-market (B/M) spread , market-to-book (M/B) spread, value spread, the portfolio returns as well the descriptive statistics of various portfolios strategies namely: the growth stock only (decile 1 based on book-to-market ratio); the value stock only (decile 10 on book-to-market ratio); a portfolio long on value and short on growth (VMG); small-cap only (decile 1 based on market capitalisation); large-cap only (decile 10 based on market capitalisation); a portfolio long on small-cap and short on large-cap (SML); the market (MKT). Descriptive statistics of the macroeconomic variables are also reported. The book-to-market spread is defined as the average book-to-market ratio of value stocks minus the average book-to-market ratio of growth stocks. The market-to-book spread is defined as the average market-to-book ratio of growth stocks minus the average market-to-book ratio of value stocks. The value spread is defined as the log book-to-market ratio of value stocks minus the log book-to-market ratio of growth stocks. EW indicates equally-weighted returns, VW indicates value-weighted returns.

	B/M Spread	**M/B Spread**	**Value Spread**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG Returns (ew)**	**VMG Returns (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**
Mean	3.873	18.344	1.423	0.300%	0.400%	0.700%	2.410%	0.480%	0.530%	2.220%	3.283%
Maximum	6.455	36.288	1.783	19.620%	16.220%	13.530%	16.460%	12.840%	39.000%	23.000%	25.100%
Minimum	1.786	5.980	1.207	-32.580%	-36.910%	-25.610%	-25.230%	-18.930%	-17.930%	-28.920%	-29.320%
Std. Dev.	1.889	6.232	0.297	5.234%	4.500%	3.540%	4.650%	4.190%	5.290%	5.420%	6.182%

	Large-Cap (ew)	**Large-Cap (vw)**	**SML Returns (ew)**	**SML (vw)**	**MKT Market (ew)**	**MKT Market (vw)**	**Dividend Yield (DY)**	**Industrial Production (IP)**	**Treasury Bill Rate (R*f*)**	**Term Premium (TERM)**
Mean	0.443%	0.630%	0.540%	0.400%	-1.620%	-1.400%	0.037	0.003	0.099	0.003
Maximum	12.430%	12.326%	17.380%	25.530%	6.830%	6.310%	0.059	0.038	0.160	0.039
Minimum	-24.900%	-25.630%	-7.700%	-13.520%	-24.100%	-45.220%	0.029	-0.059	0.047	-0.052
Std. Dev.	4.900%	5.730%	4.100%	7.220%	5.640%	5.020%	0.009	0.018	0.032	0.020

Panel B: Correlations Using Monthly Observations

Panel B in table 1 reports the correlations between the book-to-market (B/M) spread, the market-to-book (M/B) spread, the value spread and the four contemporaneous macroeconomic variables: dividend yield, industrial production, treasury bill rate and the term premium. The term premium is calculated as the difference between the rates on a UK long-term government bond and the treasury bill rate.

	B/M Spread	**M/B Spread**	**Value Spread**	**Dividend Yield**	**Industrial Production**	**Treasury Bill Rate**	**Term Premium**
B/M Spread	1.000	0.187	0.646	-0.306	0.300	-0.646	-0.434
M/B Spread		1.000	0.645	-0.639	0.656	-0.279	-0.724
Value Spread			1.000	-0.810	0.742	-0.770	-0.802
Dividend Yield				1.000	-0.737	0.582	0.742
Industrial Production					1.000	-0.593	-0.784
Treasury Bill Rate						1.000	0.559
Term Premium							1.000

Methodology

Univariate and multiple regressions are used to investigate the predictive ability of the book-to-market spread, the market-to-book spread and the value spread, for holding periods of: one month; one year; three years; and five years. The univariate regression uses each spread as the sole explanatory variable.

The simple regression framework by Fama and French (1989) is used, as given below:

$$R_{t+\tau} = \alpha + \beta_\tau X_t + e_{t+\tau} \qquad (1)$$

where:

$R_{t+\tau}$ is the equal-weighted or value-weighted excess return for the portfolios from time t to $t+\tau$;

X_t is the book-to-market spread, or the market-to-book spread or the value spread;

τ represents the holding period for the portfolio, which can be one month, one year, three years or five years.

For both equally-weighted (ew) and value-weighted (vw) returns, each of the three spreads is regressed separately on the monthly, one-year, three-year and five-year returns. The betas (β), the p-values associated with the Newey-West (1987) t-statistics and the R-squared are reported. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at the 5% level of significance.

To examine whether the predictive ability of the spreads is sustained in the presence of other variables, the following regression framework is used:

$$R_{t+\tau} = \alpha + \beta_\tau X_t + \beta_\tau Y_t + \beta_\tau I_t + \beta_\tau T_t + \beta_\tau P_t + e_{\tau+t} \qquad (2)$$

where:

$R_{t+\tau}$ is the equally-weighted or value-weighted excess return for the portfolios from time t to $t+\tau$;

X_t is the book-to-market spread, the market-to-book spread or the value spread;

Y_t is the contemporaneous dividend yield;

I_t is the contemporaneous level of industrial production;

T_t is the contemporaneous treasury bill rate;

P_t is the term premium;

τ represents the holding period for the portfolio, which can be one, three or five years. Term premium is defined as the spread between the yield on a UK government long-term bond and the treasury bill rate.

The multiple regression is performed for each of the three types of spreads and each of the conditioning variables across different horizons.

3. RESULTS

Table 2 presents the results of the univariate predictive regressions of the book-to-market spread on future returns. The betas (β), the p-values associated with the Newey-West (1987) *t*-statistics and the R-squared are reported. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at 5% level of significance. According to the beta slopes, it appears that the book-to-market spread does predict the SML and VMG portfolio returns. However, when multiple predictive regressions (Table 3 reports multiple regressions using the book-to-market spread along with four contemporaneous macroeconomic variables, Panels A-E) are considered, it is notable that the book-to-market spread loses its predictive power on SML. Industrial production as well as the treasury bill rate are the most significant variables as they show a strong and predictive power for most of the portfolios, particularly the SML, over all investment horizons.

For the market-to-book spread, the results (presented in Table 4) are different as it appears that from the univariate regressions the market-to-book spread predicts the SML returns with a negative sign on the equal-weighted returns. It also predicts the VMG returns with a negative sign, as well as the small-cap returns with a negative sign. Finally, it shows no predictive power on the growth, small-cap, large-cap and the market portfolio returns.

From the multiple regressions (Table 5 reports multiple regressions using the market-to-book spread along with four contemporaneous macroeconomic variables, Panels A-E), the market-to-book spread loses all its predictive power over the value returns, and most of its predictive power over the SML portfolio returns. It is also apparent that the predictive signs of the market-to-book spread on the small-cap and value returns are reversed as compared to the results under the univariate regressions. The small-cap and value are now predicted with a positive sign while they were predicted with a negative sign under the univariate regression.

Table 6 reports the univariate predictive regressions on the value spread. The value spread shows significant coefficients only for the equally-weighted monthly market portfolio. The coefficients are insignificant for all other portfolio returns. When moving into the multiple regressions (Table 7 reports multiple regressions using the value spread along with four contemporaneous macroeconomic variables, Panels A-E), the value spread shows no predictive power for the returns on any of the portfolio formation strategies. The p-values for the coefficients on all the portfolio returns are insignificant at the 5% level. The foregoing results are consistent with Liu and Zhang (2007), and confirm that the value spread has no predictive power on future stock returns, on any other portfolio strategy. As to the coefficients for the macroeconomic variables, it can be seen that the level of industrial production still shows strong predictive power over future returns and it is most significant on the returns of the small-cap and the SML portfolios. The treasury bill rate also shows strong predictive power over the returns of the SML portfolios.

4. CONCLUSION

Overall, the picture that emerges from the UK research is consistent with the US-based findings of Liu and Zhang (2007). There is confirmation that the value spread is not a good predictor of stock returns. The results suggest that the predictive power of the three different spreads examined (the book-to-market spread and the market-to-book and the value spread) depends on the portfolio formation strategies and the relative proportions of small-cap, large-cap, value and growth stocks in the portfolio. While the book-to-market spread may have some predictive power over the small-cap segment of the market, it has no predictive power over the large-cap or growth segments of the market. Additionally, there is evidence that the predictive signs of the spreads vary when examining different classifications of stocks. In contrast, the market-to-book spread predicts the small-cap and the market portfolio with a negative sign but predicts growth portfolios with a positive sign. Small minus large portfolios also tend to have the same predictive signs as the small-caps and market portfolio. Finally, there is evidence that the macroeconomic variables, namely the level of industrial production, the treasury bill rate, the term structure of interest rates and the dividend yield, appear to be better predictors of returns than the spreads.

References

Campbell, J.Y. and T. Vuolteenaho (2004), 'Bad beta, good beta', *American Economic Review*, Vol. 94, pp. 1249-75.

Cohen, R., C. Polk, and T. Vuolteenaho (2003), 'The value spread', *Journal of Finance*, Vol. 58, pp. 609-641.

Daniel, K. and S. Titman (1997), 'Evidence on the characteristics of cross sectional variation in stock returns', *Journal of Finance*, Vol. 52, pp. 1–33.

Davies, J., E. F. Fama and K. R. French (2000), 'Characteristics, covariances, and average returns: 1927-1997', *Journal of Finance*, Vol. 55, pp. 389-406.

Fama, E. F. and K. R. French (1989), 'Business conditions and expected returns on stocks and bonds, *Journal of Financial Economics*, Vol.25, pp. 23-49.

Fama, E. F. and K. R. French (1992), 'The Cross Section of Expected Returns', *Journal of Finance*, Vol. 47, No. 2, pp. 427-465.

Fama, E. F. and K. R. French (1993), 'Common Risk Factors in the Returns on Stocks and Bonds', *Journal of Financial Economics*, Vol. 33, pp. 3-56.

Fama, E. F. and Kenneth R. French (1995), 'Size and Book-to-Market Factors in Earnings and Returns', *Journal of Finance*, Vol. 50, pp. 131-156.

Fama, E. F. and K. R. French (1996), 'Multifactor Explanations of Asset Pricing Anomalies', *Journal of Finance*, Vol. 50, pp. 131-155.

Gregory, A., R. D. F. Harris and M. Michou (2001), 'An Analysis of Contrarian Investment Strategies in the UK' *Journal of Business Finance and Accounting*, Vol. 28/9&10, pp. 1931-1228.

Gregory, A., R. D. F. Harris and M. Michou (2003), 'Contrarian Investment and Macroeconomic Risk' *Journal of Business Finance and Accounting*, Vol. 30, 1&2, pp. 213-255.

Gulen, H., Y. Xing and L. Zhang (2008), 'Value versus growth: Time-varying expected stock returns', *working paper, University of Michigan*.

Hung, D. C.-H., M. Shackleton and X. Xu (2004), 'CAPM, Higher Co-moment and Factor Models of UK Stock Returns', *Journal of Business Finance and Accounting*, Vol. 31, (1) & (2), pp. 87 - 112.

Lakonishok, J., A. Shleifer and R. W. Vishny (1994), 'Contrarian Investment, Extrapolation and Risk', *Journal of Finance* Vol. 49 (5), pp. 1541-78.

Lettau, M. and S. Ludvigson (2001), 'Resurrecting the (C)CAPM: A cross- sectional test when risk premia are time-varying, *Journal of Political Economy*, Vol. 109, pp. 1238–1287.

Li, E. X., D. Livdan and L. Zhang (2008), "Anomalies", *Review of Financial Studies, forthcoming*.

Liew, J. and M. Vassalou (2000), 'Can book-to-market, size and momentum be risk factors that predict economic growth?' *Journal of Financial Economics,* Vol. 57, pp. 221-245.

Liu, W. (2006), 'A liquidity-augmented capital asset pricing model', *Journal of Financial Economics,* Vol. 82, pp. 631-671.

Liu, N. and L. Zhang (2007), 'Is the value spread a useful predictor of returns?', *Journal of Financial Markets* , Vol. 11 (3), pp. 199-227.

Livdan, D., H. Sapriza and L. Zhang (2008), 'Financially constrained stock Returns' *Journal of Finance, forthcoming.*

Michou, M., S. Mouselli and A.W. Stark (2007), 'Estimating the Fama and French Factors in the UK- An Empirical Review', *Manchester Business School Working Paper Series.*

Newey, W. K. and K. D. West (1987), 'A Simple, Positive Semi-Definite, Heteroskedasticity and Autocorrelation Consistent Covariance Matrix', *Econometrica*, Vol. 55, pp. 703.

Petkova, R. and L. Zhang (2005), 'Is value riskier than growth?' *Journal of Financial Economics,* Vol. 78 (1), pp. 187-202.

Rosenberg, B., K. Reid and R. Lanstein (1985), 'Persuasive Evidence of Market Inefficiency', *Journal of Portfolio Management*, Vol. 11, pp. 9-17.

Zhang, L. (2005), 'The value premium', *Journal of Finance*, Vol. 60, pp. 67-103.

Table 2
Univariate Predictive Regressions with Book-to-Market Spread (1975 - 2006)

Table 2 reports the univariate predictive regressions of portfolio returns on the book-to-market spread. The portfolio returns are across four different holding horizons (τ): monthly (M); annually (Y); three-year (3Y); five-year (5Y). The book-to-market spread is measured as the average book-to-market ratio of value stocks (decile 10) minus the average book-to-market ratio of growth stocks (decile 1). Equally-weighted (ew) and value-weighted (vw) returns are reported for the following portfolios: the entire market (MKT); the growth stock only (decile 1 on book-to-market); the value stock (decile 10 on book-to-market); a portfolio long on value and short on growth (VMG); small-cap (decile 1 on market capitalisation); large-cap (decile 10 on market capitalisation); a portfolio long on small-cap and short on large-cap (SML). I report the betas (β), the p-values associated with the Newey-West (1987) t-statistics, the R-squared. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at 5% level of significance. P-values less than 0.05 and significant coefficients are in bold.

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							β_{S_t}							
M	**0.014**	**0.011**	0.000	0.000	0.000	0.000	0.000	0.000	**0.011**	0.012	0.000	0.000	0.000	0.000
Y	0.032	0.022	0.031	0.011	0.010	0.032	-0.023	0.012	0.053	0.054	0.023	0.020	0.032	0.033
3Y	**0.072**	0.014	0.051	-0.020	0.062	**0.161**	0.011	**0.152**	**0.143**	**0.132**	0.035	0.000	**0.095**	0.101
5Y	0.072	-0.050	0.061	-0.092	**0.188**	0.102	0.102	0.225	0.179	0.101	0.000	-0.071	**0.141**	**0.163**
τ							**P-value**							
M	**0.000**	**0.000**	0.402	0.205	0.501	0.182	0.104	0.611	**0.044**	0.089	0.785	0.339	0.282	0.301
Y	0.193	0.143	0.172	0.443	0.586	0.465	0.101	0.701	0.256	0.283	0.082	0.253	0.438	0.451
3Y	**0.021**	0.622	0.182	0.654	0.261	**0.000**	0.812	**0.021**	**0.030**	**0.043**	0.122	1.002	**0.031**	0.062
5Y	0.380	0.665	0.511	0.486	**0.011**	0.064	0.094	0.151	0.201	0.463	0.988	0.563	**0.000**	**0.022**
τ							$\mathbf{R^2}$							
M	0.073	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.026	0.000	0.000	0.000	0.000
Y	0.052	-0.022	0.011	-0.053	-0.032	-0.021	-0.023	-0.059	0.036	0.023	0.015	-0.037	-0.021	-0.011
3Y	0.163	-0.062	0.000	-0.063	0.073	0.263	-0.061	0.172	0.194	0.164	-0.021	-0.065	0.196	0.189
5Y	0.011	-0.051	-0.031	-0.012	0.262	0.000	0.012	0.128	0.072	-0.021	-0.077	-0.032	0.224	0.142

Table 3

Multiple Predictive Regressions with Book-to-Market Spread (1975 - 2006)

Table 3 reports the multiple predictive regressions of portfolio returns on the book-to-market spread (S), dividend yield (DY), level of industrial production (IP), treasury bill rate (Rf) and the term premium (TERM). The portfolio returns are across four different holding horizons (τ): monthly (M); annually (Y); three-year (3Y); five-year (5Y). The book-to-market spread is measured as the average book-to-market ratio of value stocks (decile 10) minus the average book-to-market ratio of growth stocks (decile 1) in a ten-decile one-way sort of the stock universe based on the book-to-market ratios. Equally-weighted (ew) and value-weighted (vw) returns are reported for the following portfolios: the entire market (MKT); the growth stock only (decile 1 on book-to-market); the value stock (decile 10 on book-to-market); a portfolio long on value and short on growth (VMG); small-cap (decile 1 on market capitalisation); large-cap (decile 10 on market capitalisation); a portfolio long on small-cap and short on large-cap (SML). I report the betas (β), the p-values associated with the Newey-West (1987) t-statistics, the R-squared. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at 5% level of significance. P-values less than 0.05 and significant coefficients are in bold.

Panel A: Panel A reports the beta (β) and p-value of the book-to-market spread (S) from a multiple predictive regression of the various returns across the time horizons on the book-to-market spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ	β_{S_t}													
M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Y	0.094	0.074	0.078	0.056	0.086	0.124	0.012	0.066	**0.155**	**0.155**	0.074	0.084	0.059	0.047
3Y	0.065	0.083	-0.021	0.023	0.049	0.141	0.068	0.111	0.089	0.062	0.082	0.082	-0.011	-0.021
5Y	0.133	0.113	-0.025	-0.051	**0.264**	**0.316**	0.271	0.454	0.154	0.131	0.163	0.131	-0.031	0.029
τ	**P-value** $_{S,t}$													
M	0.707	0.742	0.634	0.713	0.939	0.863	0.351	0.501	0.512	0.695	0.813	0.867	0.145	0.477
Y	0.082	0.219	0.202	0.434	0.121	0.174	0.735	0.333	**0.013**	**0.025**	0.189	0.234	0.163	0.326
3Y	0.223	0.165	0.809	0.809	0.376	0.233	0.485	0.457	0.214	0.313	0.112	0.172	0.773	0.503
5Y	0.273	0.583	0.943	0.873	**0.000**	**0.000**	0.262	0.301	0.413	0.482	0.287	0.581	0.602	0.871

Panel B: Panel B reports the beta (β) and p-value of the dividend yield (DY) from a multiple predictive regression of the various returns across the time horizons on the book-to-market spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{DY\,t}$							
M	**-0.021**	-0.011	**-0.024**	**-0.011**	**-0.034**	-0.017	0.000	0.000	**-0.024**	**-0.034**	**-0.011**	**-0.011**	**-0.025**	**-0.027**
Y	-0.032	0.000	-0.042	0.011	-0.116	0.099	-0.088	0.073	-0.144	-0.182	0.039	0.013	**-0.157**	**-0.190**
3Y	0.056	0.103	0.046	0.116	-0.098	0.342	-0.130	0.101	-0.012	-0.011	0.112	0.112	-0.113	-0.124
5Y	0.183	0.073	-0.101	-0.047	**0.291**	**0.372**	0.355	0.419	0.312	0.417	0.139	0.079	0.089	0.278
τ							**P-value** $_{DY,t}$							
M	**0.000**	0.051	**0.011**	**0.022**	**0.000**	0.089	0.443	0.853	**0.000**	**0.000**	**0.032**	**0.039**	**0.015**	**0.000**
Y	0.654	0.985	0.748	0.970	0.059	0.313	0.349	0.332	0.147	0.111	0.711	0.900	**0.023**	**0.045**
3Y	0.493	0.343	0.745	0.463	0.304	0.092	0.373	0.452	0.914	0.946	0.168	0.323	0.169	0.290
5Y	0.182	0.711	0.679	0.893	**0.011**	**0.000**	0.088	0.267	0.169	0.039	0.338	0.699	0.509	0.111

Panel C: Panel C reports the beta (β) and p-value of the level of industrial production (IP) from a multiple predictive regression of the various returns (across the time horizons) on the book-to-market spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{IP\,t}$							
M	**0.000**	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	**0.000**	**0.000**
Y	-0.016	0.000	-0.016	0.015	-0.023	-0.015	-0.012	-0.013	**-0.044**	**-0.035**	0.000	0.012	**-0.041**	**-0.035**
3Y	**-0.027**	0.013	-0.027	0.023	**-0.046**	0.000	-0.016	-0.019	**-0.055**	**-0.064**	0.012	0.019	**-0.055**	**-0.078**
5Y	-0.019	0.023	0.000	0.029	**-0.027**	0.039	-0.018	0.034	**-0.074**	**-0.061**	0.017	0.032	**-0.064**	**-0.055**

τ	P-value $_{IP,\,t}$													
M	**0.036**	0.266	0.055	0.689	**0.032**	0.115	0.926	0.310	**0.011**	**0.011**	0.242	0.345	**0.014**	**0.000**
Y	0.148	0.780	0.428	0.368	0.070	0.590	0.432	0.512	**0.020**	**0.030**	0.658	0.510	**0.019**	**0.011**
3Y	**0.024**	0.335	0.264	0.211	**0.031**	0.897	0.499	0.768	**0.000**	**0.000**	0.312	0.100	**0.000**	**0.000**
5Y	0.215	0.365	0.991	0.489	**0.026**	0.312	0.695	0.491	**0.017**	**0.017**	0.320	0.232	**0.000**	**0.012**

Panel D: Panel D reports the beta (β) and p-value of the treasury bill rate (Rf) from a multivariate predictive regression of the various returns (across the time horizons) on the book-to-market spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ	$\beta_{Rf\,t}$													
M	**-1.734**	**-1.074**	-0.826	0.234	-0.511	-0.712	0.389	-0.911	-0.631	-0.834	-0.110	0.245	-0.512	-1.111
Y	0.000	0.021	-0.012	0.019	0.000	0.000	0.011	-0.026	0.000	0.000	0.024	0.025	-0.033	-0.048
3Y	**-0.026**	0.012	-0.051	0.000	-0.035	-0.043	0.034	-0.018	**-0.067**	**-0.065**	0.000	0.019	**-0.059**	**-0.072**
5Y	-0.028	0.021	-0.032	0.000	**-0.036**	-0.009	0.021	0.030	**-0.078**	**-0.074**	0.022	0.035	**-0.074**	**-0.089**
τ	P-value $_{Rf,\,t}$													
M	**0.000**	**0.039**	0.199	0.689	0.364	0.254	0.399	0.147	0.328	0.267	0.826	0.685	0.213	0.069
Y	0.835	0.226	0.733	0.329	0.929	0.930	0.613	0.458	0.813	0.910	0.344	0.149	0.110	0.057
3Y	**0.009**	0.538	0.058	0.959	0.114	0.330	0.451	0.790	**0.026**	**0.030**	0.828	0.319	**0.013**	**0.000**
5Y	0.289	0.479	0.419	0.924	**0.012**	0.724	0.825	0.690	**0.020**	**0.034**	0.490	0.323	**0.000**	**0.029**

Panel E: Panel E reports the beta (β) and p-value of the term spread (TERM) from a multiple predictive regression of the various returns (across the time horizons) on the book-to-market spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	MKT (vw)	Growth Decile (ew)	Growth Decile (vw)	Value Decile (ew)	Value Decile (vw)	VMG (ew)	VMG (vw)	Small-Cap (ew)	Small-Cap (vw)	Large-Cap (ew)	Large-Cap (vw)	SML (ew)	SML (vw)
τ							$\beta_{TERM\,t}$							
M	0.000	0.000	0.000	0.013	**0.011**	0.000	0.014	0.000	0.014	0.015	0.000	0.000	0.000	0.000
Y	0.012	0.035	0.013	0.033	0.029	-0.043	0.039	-0.063	0.000	0.009	0.025	0.035	-0.021	-0.025
3Y	-0.021	0.042	-0.042	0.049	0.035	-0.091	0.069	-0.112	-0.081	-0.095	0.036	0.057	-0.097	-0.121
5Y	-0.036	0.189	0.135	0.157	**-0.101**	0.038	-0.161	-0.168	-0.165	**-0.239**	0.073	0.159	**-0.198**	**-0.268**
τ							**P-value** $_{TERM,\,t}$							
M	0.424	0.610	0.415	0.226	**0.025**	0.476	0.123	0.658	0.135	0.225	0.398	0.319	0.347	0.469
Y	0.835	0.546	0.934	0.435	0.275	0.646	0.450	0.430	0.964	0.835	0.621	0.469	0.708	0.654
3Y	0.602	0.368	0.556	0.410	0.451	0.529	0.411	0.411	0.156	0.129	0.410	0.260	0.097	0.092
5Y	0.556	0.110	0.253	0.129	**0.034**	0.836	0.070	0.357	0.096	**0.016**	0.240	0.063	**0.013**	**0.000**

Panel F: Panel F reports the R-squared and no of observations (T) from a multiple predictive regression of the various returns (across the time horizons) on the book-to-market spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	MKT (vw)	Growth Decile (ew)	Growth Decile (vw)	Value Decile (ew)	Value Decile (vw)	VMG (ew)	VMG (vw)	Small-Cap (ew)	Small-Cap (vw)	Large-Cap (ew)	Large-Cap (vw)	SML (ew)	SML (vw)
τ							R^2							
M	0.145	0.049	0.039	0.000	0.126	0.024	0.000	0.016	0.164	0.126	0.000	0.000	0.074	0.112
Y	0.223	-0.092	-0.183	-0.346	0.497	0.199	-0.233	-0.134	0.357	0.356	-0.064	-0.158	0.401	0.457
3Y	0.346	0.097	-0.206	-0.235	0.541	0.321	-0.177	-0.072	0.490	0.431	0.256	0.270	0.685	0.609
5Y	0.357	0.408	-0.178	0.019	0.779	0.248	0.110	-0.018	0.451	0.453	0.459	0.461	0.631	0.421

Table 4
Univariate Predictive Regressions with Market-to-Book Spread (1975 - 2006)

Table 4 reports the univariate predictive regressions of portfolio returns on the market-to-book spread. The portfolio returns are across four different holding horizons **(** τ): monthly (M); annually (Y); three year (3Y); five-year (5Y). The market-to-book spread is measured as the average market-to-book ratio of growth stocks (decile 1) minus the average market-to-book ratio of value stocks (decile10) in a ten-decile one-way sort of the stock universe based on the market-to-book ratio. Equally-weighted (ew) and value-weighted (vw) returns are reported for the following portfolios: the entire market (MKT); the growth stock only (decile 1 on book-to-market); the value stock (decile 10 on book-to-market); a portfolio long on value and short on growth (VMG); small-cap (decile 1 on market capitalisation); large-cap (decile 10 on market capitalisation); a portfolio long on small-cap and short on large-cap (SML). I report the betas (β), the p-values associated with the Newey-West (1987) t-statistics, the R-squared. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at 5% level of significance. P-values less than 0.05 and significant coefficients are in bold.

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							β_{S_t}							
M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**
Y	0.000	0.000	0.000	0.000	**-0.012**	0.000	-0.011	-0.014	-0.018	-0.011	0.000	0.000	**-0.017**	**-0.010**
3Y	-0.014	0.000	0.015	0.000	**-0.017**	0.000	-0.016	0.000	-0.017	-0.018	0.000	0.000	0.000	-0.015
5Y	-0.012	-0.013	0.000	0.000	**-0.023**	-0.017	-0.028	0.000	-0.022	-0.024	-0.016	-0.058	0.000	0.000
τ							**P-value**							
M	0.790	0.345	0.746	0.945	0.245	0.881	0.123	0.154	0.492	0.454	0.938	0.854	0.109	**0.045**
Y	0.157	0.451	0.831	0.380	**0.012**	0.419	0.029	0.108	0.184	0.135	0.658	0.309	**0.031**	**0.029**
3Y	0.190	0.569	0.451	0.669	**0.000**	0.659	0.110	0.969	0.350	0.357	0.369	0.724	0.668	0.369
5Y	0.086	0.184	0.726	0.680	**0.023**	0.235	0.069	0.929	0.259	0.131	0.108	0.557	0.650	0.421
τ							$\mathbf{R}^2$							
M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.013
Y	-0.018	-0.035	-0.054	-0.027	0.064	-0.034	0.046	0.000	-0.019	-0.028	-0.047	-0.035	0.029	0.059
3Y	0.000	-0.068	-0.028	-0.057	0.108	-0.054	0.080	-0.050	-0.037	-0.022	-0.018	-0.054	-0.049	-0.031
5Y	0.167	0.038	-0.055	-0.044	0.270	0.000	0.159	-0.051	0.045	0.139	0.111	-0.029	-0.079	-0.041

Table 5
Multiple Predictive Regressions with Market-to-Book Spread (1975 - 2006)

Table 5 reports the multiple predictive regressions of portfolio returns on the market-to-book spread (S), dividend yield (DY), level of industrial production (IP), treasury bill rate (Rf), and the term premium (TERM). The portfolio returns are across four different holding horizons (τ): monthly (M); annually (Y); three-year (3Y); five-year (5Y). The market-to-book spread is measured as the average market-to-book ratio of growth stocks (decile 1) minus the average market-to-book ratio of value stocks (decile10) in a ten-decile one-way sort of the stock universe based on the book-to-market ratios. Equally-weighted (ew) and value-weighted (vw) returns are reported for the following portfolios: the entire market (MKT); the growth stock only (decile 1 on book-to-market); the value stock (decile 10 on book-to-market); a portfolio long on value and short on growth (VMG); small-cap (decile 1 on market capitalisation); large-cap (decile 10 on market capitalisation); a portfolio long on small-cap and short on large-cap (SML). I report the betas (β), the p-values associated with the Newey-West (1987) t-statistics, the R-squared. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at 5% level of significance. P-values less than 0.05 and significant coefficients are in bold.

Panel A: Panel A reports the beta (β) and p-value of the market-to-book spread from a multivariate predictive regression of the various returns (across the time horizons) on the market-to-book spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**	**LMS (ew)**	**LMS (vw)**
τ							β_{S_t}									
M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Y	0.000	0.026	0.000	0.015	0.000	0.015	0.000	-0.011	0.000	0.000	0.015	0.022	-0.015	**-0.022**	0.015	**0.026**
3Y	0.016	**0.033**	0.026	**0.036**	0.000	0.017	**-0.022**	-0.025	0.027	0.023	0.015	**0.032**	0.000	-0.010	0.000	0.013
5Y	0.019	**0.027**	0.023	**0.032**	0.000	0.016	**-0.022**	-0.036	0.027	0.018	0.016	**0.036**	0.000	-0.020	0.000	0.016
							P-value									
τ							s_t									
M	0.743	0.403	0.966	0.435	0.886	0.364	0.968	0.952	0.858	0.868	0.363	0.127	0.275	0.062	0.235	0.056
Y	0.925	0.196	0.935	0.335	0.946	0.468	0.667	0.379	0.974	0.968	0.366	0.145	0.218	**0.046**	0.126	**0.026**
3Y	0.453	**0.033**	0.068	**0.017**	0.879	0.568	**0.023**	0.136	0.324	0.458	0.168	**0.015**	0.547	0.357	0.835	0.252
5Y	0.583	**0.026**	0.054	**0.012**	0.924	0.557	**0.012**	0.148	0.368	0.634	0.185	**0.016**	0.964	0.306	0.904	0.274

Panel B: Panel B reports the beta (β) and p-value of the dividend yield (DY) from a multiple predictive regression of the various returns (across the time horizons) on the market-to-book spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{DY\,t}$							
M	**-0.021**	-0.011	**-0.020**	-0.011	**-0.031**	-0.023	0.000	0.000	**-0.032**	**-0.034**	-0.011	-0.016	**-0.021**	**-0.021**
Y	0.000	0.064	-0.021	0.065	-0.076	0.197	-0.105	0.067	-0.101	-0.126	0.108	0.104	**-0.188**	**-0.224**
3Y	0.079	0.185	0.147	0.211	-0.086	0.457	-0.157	0.043	0.085	0.053	0.153	0.257	-0.084	-0.179
5Y	0.112	0.068	0.000	0.105	0.074	0.156	0.066	-0.011	0.245	0.334	0.059	0.054	0.100	0.193
τ							**P-value** $_{DY,t}$							
M	**0.013**	0.114	**0.024**	0.076	**0.000**	0.201	0.602	0.684	**0.000**	**0.000**	0.056	0.136	**0.022**	**0.000**
Y	0.945	0.495	0.860	0.597	0.352	0.198	0.359	0.536	0.558	0.455	0.373	0.384	**0.031**	**0.000**
3Y	0.386	0.186	0.433	0.153	0.437	0.058	0.189	0.698	0.535	0.725	0.123	0.100	0.252	0.205
5Y	0.433	0.589	0.930	0.356	0.636	0.401	0.537	0.895	0.289	0.111	0.557	0.589	0.300	0.305

Panel C: Panel C reports the beta (β) and p-value of the level of industrial production (IP) from a multiple predictive regression of the various returns (across the time horizons) on the market-to-book spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{IP,t}$							
M	**0.000**	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	**0.000**	**0.000**	0.000	0.000	**0.000**	**0.000**
Y	-0.035	-0.021	-0.021	0.000	**-0.031**	-0.038	-0.011	-0.021	**-0.057**	**-0.057**	-0.010	-0.021	**-0.042**	**-0.033**
3Y	**-0.038**	-0.015	-0.037	0.000	**-0.057**	-0.020	-0.017	-0.019	**-0.093**	**-0.084**	-0.019	-0.014	**-0.058**	**-0.052**
5Y	-0.047	0.000	-0.020	0.014	**-0.056**	0.000	-0.024	0.000	**-0.076**	**-0.078**	-0.012	0.000	**-0.057**	**-0.051**
							P-value							
τ							$_{IP,t}$							
M	**0.013**	0.051	0.058	0.425	**0.011**	**0.037**	0.804	0.173	**0.000**	**0.000**	0.079	0.098	**0.014**	**0.000**
Y	0.125	0.246	0.378	0.726	**0.015**	0.206	0.425	0.227	**0.035**	**0.043**	0.326	0.325	**0.000**	**0.000**
3Y	**0.027**	0.349	0.057	0.905	**0.000**	0.447	0.463	0.609	**0.000**	**0.000**	0.404	0.635	**0.000**	**0.000**
5Y	0.057	0.500	0.224	0.533	**0.019**	0.926	0.066	0.891	**0.000**	**0.011**	0.237	0.785	**0.000**	**0.000**

Panel D: Panel D reports the beta (β) and p-value of the treasury bill rate (Rf) from a multiple predictive regression of the various returns (across the time horizons) on the market-to-book spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{Rf\,t}$							
M	**-1.304**	**-1.046**	-0.627	0.206	-0.458	-0.958	0.089	**-1.082**	-0.837	-1.004	-0.235	-0.046	-0.653	-1.007
Y	-0.028	-0.023	-0.029	-0.016	**-0.034**	**-0.057**	0.011	-0.044	-0.048	-0.046	-0.022	-0.016	-0.037	-0.034
3Y	**-0.065**	-0.029	**-0.068**	-0.030	**-0.050**	**-0.098**	0.019	-0.038	**-0.107**	**-0.110**	**-0.031**	-0.046	**-0.046**	**-0.058**
5Y	-0.049	-0.016	**-0.047**	-0.028	**-0.067**	-0.056	-0.012	-0.012	**-0.168**	**-0.114**	-0.019	-0.012	**-0.067**	**-0.063**
τ							**P-value** $_{Rf,\,t}$							
M	**0.000**	**0.000**	0.336	0.636	0.278	0.058	0.803	**0.046**	0.135	0.102	0.618	0.903	0.137	0.056
Y	0.069	0.267	0.302	0.657	**0.034**	**0.012**	0.605	0.088	0.087	0.124	0.175	0.336	0.064	0.066
3Y	**0.011**	0.069	**0.021**	0.126	**0.022**	**0.000**	0.334	0.325	**0.000**	**0.013**	**0.032**	0.111	**0.000**	**0.036**
5Y	0.087	0.327	**0.046**	0.257	**0.027**	0.068	0.602	0.679	**0.020**	**0.033**	0.235	0.562	**0.000**	**0.006**

Panel E: Panel E reports the beta (β) and p-value of the term spread from a multiple predictive regression of the various returns (across the time horizons) on the market-to-book spread, the dividend yield, the level of industrial production, the treasury bill rate and the term premium

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{TERM\ t}$							
M	0.000	0.000	0.012	0.012	**0.018**	0.000	0.000	0.000	0.000	0.012	0.000	0.016	0.000	0.000
Y	-0.041	0.000	-0.032	0.072	-0.013	-0.090	0.026	-0.109	-0.088	-0.069	-0.012	0.014	-0.066	-0.076
3Y	-0.039	0.025	-0.025	0.074	0.018	-0.160	0.012	**-0.156**	**-0.111**	**-0.117**	0.000	0.027	-0.081	**-0.119**
5Y	-0.012	**0.206**	**0.149**	**0.215**	-0.078	0.070	**-0.158**	-0.167	-0.169	**-0.200**	0.101	**0.222**	**-0.163**	**-0.264**
τ							**P-value** $_{TERM,\ t}$							
M	0.425	0.453	0.262	0.088	**0.014**	0.368	0.163	0.524	0.228	0.224	0.206	0.126	0.926	0.964
Y	0.374	0.958	0.536	0.636	0.758	0.236	0.594	0.119	0.120	0.188	0.725	0.887	0.136	0.057
3Y	0.211	0.667	0.757	0.147	0.719	0.278	0.805	**0.019**	**0.035**	**0.018**	0.997	0.527	0.077	**0.047**
5Y	0.788	**0.011**	**0.036**	**0.010**	0.235	0.657	**0.015**	0.157	0.153	**0.032**	0.057	**0.000**	**0.011**	**0.000**

Panel F: Panel F reports the R-squared and no of observations (T) from a multiple predictive regression of the various returns (across the time horizons) on the market spread-to-book spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							**R^2**							
M	0.136	0.047	0.047	0.000	0.126	0.023	0.000	0.012	0.162	0.136	0.012	0.023	0.074	0.127
Y	0.011	0.020	-0.226	-0.247	0.248	-0.036	-0.205	-0.137	0.206	0.177	-0.117	0.088	0.458	0.658
3Y	0.395	0.222	-0.022	0.068	0.500	0.188	-0.055	-0.037	0.505	0.437	0.173	0.269	0.717	0.684
5Y	0.327	0.626	0.101	0.284	0.504	0.025	0.109	-0.209	0.537	0.425	0.521	0.606	0.606	0.506

Table 6
Univariate Predictive Regressions with Value Spread (1975 - 2006)

Table 6 reports the univariate predictive regressions of portfolio returns on the value spread. The portfolio returns are across four different holding horizons **(** τ): monthly (M); annually (Y); three-year (3Y); five-year (5Y). The value spread is measured as the log book-to-market of value stocks (decile 10) minus the log book-to-market of growth stocks (decile 1) in a ten-decile one-way sort of the stock universe based on the book-to-market ratios. Equally-weighted (ew) and value-weighted (vw) returns are reported for the following portfolios: the entire market (MKT); the growth stock only (decile on book-to-market); the value stock (decile 10 on book-to-market); a portfolio long on value and short on growth (VMG); a small-cap (decile 1 on market capitalisation); large-cap (decile 10 on market capitalisation); a portfolio long on small-cap and short on large-cap (SML). I report the betas (β), the p-values associated with the Newey-West (1987) t-statistics, the R-squared. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at 5% level of significance. P-values less than 0.05 and significant coefficients are in bold.

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							β_{S_t}							
M	0.038	0.029	-0.012	-0.021	-0.022	0.000	-0.026	0.000	0.000	0.000	-0.023	-0.022	0.000	0.015
Y	0.012	-0.035	0.109	-0.015	-0.168	0.030	-0.216	0.050	0.011	0.028	0.000	-0.040	0.013	0.051
3Y	0.029	-0.290	0.242	-0.137	-0.120	0.468	-0.279	0.652	0.117	0.121	-0.129	-0.328	0.235	0.331
5Y	-0.210	-0.554	0.059	-0.450	-0.129	-0.011	-0.174	0.680	-0.153	-0.223	-0.598	-0.697	0.289	0.423
τ							**P-value**							
M	**0.025**	0.068	0.827	0.329	0.278	0.936	0.063	0.825	0.853	0.963	0.336	0.169	0.945	0.724
Y	0.924	0.646	0.446	0.924	0.362	0.824	0.063	0.752	0.956	0.908	0.956	0.608	0.935	0.863
3Y	0.935	0.321	0.435	0.656	0.603	0.221	0.357	0.128	0.756	0.722	0.436	0.284	0.274	0.174
5Y	0.444	0.057	0.865	0.310	0.629	0.956	0.646	0.208	0.703	0.624	0.098	0.056	0.136	0.054
τ							$\mathbf{R^2}$							
M	**0.044**	0.024	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.000	0.035	0.000	0.000
Y	-0.054	-0.043	-0.046	-0.055	0.000	-0.053	0.056	-0.050	-0.062	-0.062	-0.063	-0.052	-0.065	-0.055
3Y	-0.068	0.048	-0.012	-0.067	-0.041	0.025	0.000	0.127	-0.053	-0.049	-0.012	0.035	0.016	0.057
5Y	-0.008	0.251	-0.067	0.059	-0.056	-0.098	-0.041	0.108	-0.066	-0.045	0.259	0.335	0.047	0.074

Table 7
Multiple Predictive Regressions with Value Spread (1975 - 2006)

This table reports the multiple predictive regressions of portfolio returns on the value spread (S), dividend yield (DY), level of industrial production (IP), treasury bill rate (Rf), and the term premium (TERM). The portfolio returns are across four different holding horizons **(** τ): monthly (M); annually (Y); three-year (3Y); five-year (5Y). The value spread is measured as the log book-to-market of value stocks (decile 10) minus the log book-to-market of growth stocks (decile1) in a ten-decile one-way sort of the stock universe based on the book-to-market ratios. Equally-weighted (ew) and value-weighted (vw) returns are reported for the following portfolios: the entire market (MKT); the growth stock only (decile 1 on book-to-market); the value stock (decile 10 on book-to-market); a portfolio long on value and short on growth (VMG); small-cap (decile 1 on market capitalisation); large-cap (decile 10 on market capitalisation); a portfolio long on small-cap and short on large-cap (SML). I report the betas (β), the p-values associated with the Newey-West (1987) t-statistics, the R-squared. All p-values are two-tailed. A p-value less than 0.05 suggests that the coefficient is significantly different from zero at 5% level of significance. P-values less than 0.05 and significant coefficients are in bold.

Panel A: Panel A reports the beta (β) and p-value of the value spread from a multiple predictive regression of the various returns (across the time horizons) on the value spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							β_{S_t}							
M	-0.052	-0.018	-0.098	-0.056	-0.066	-0.016	0.073	0.038	-0.047	-0.074	-0.034	-0.025	-0.074	-0.045
Y	0.256	0.579	-0.157	0.268	0.066	0.894	0.101	0.637	0.437	0.347	0.573	0.705	-0.363	-0.625
3Y	0.525	0.226	0.169	0.056	0.354	0.624	0.105	0.984	0.958	1.110	0.274	0.226	0.707	0.664
5Y	0.806	0.306	0.458	-0.067	0.602	0.893	0.106	1.004	1.052	1.205	0.385	0.247	0.658	0.963
							P-value							
τ							s_t							
M	0.407	0.705	0.238	0.558	0.274	0.905	0.453	0.474	0.596	0.462	0.605	0.772	0.817	0.362
Y	0.728	0.425	0.925	0.748	0.927	0.216	0.906	0.514	0.664	0.784	0.447	0.326	0.515	0.257
3Y	0.347	0.724	0.858	0.924	0.525	0.562	0.934	0.485	0.147	0.187	0.773	0.737	0.107	0.174
5Y	0.157	0.657	0.705	0.906	0.363	0.143	0.924	0.258	0.067	0.093	0.636	0.773	0.146	0.142

Panel B: Panel B reports the beta (β) and p-value of the dividend yield (DY) from a multiple predictive regression of the various returns (across the time horizons) on the value spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf), and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{DY\,t}$							
M	**-0.020**	-0.015	-0.025	**-0.012**	**-0.035**	-0.015	0.000	0.000	**-0.036**	**-0.038**	**-0.063**	**-0.017**	**-0.016**	**-0.026**
Y	-0.016	0.016	-0.013	0.017	-0.111	0.100	-0.080	0.057	-0.126	-0.158	0.046	0.017	**-0.134**	**-0.153**
3Y	0.045	0.183	0.036	0.117	-0.105	0.353	-0.128	0.116	-0.016	-0.024	0.137	0.148	**-0.127**	-0.173
5Y	0.043	-0.038	-0.104	0.000	0.076	0.064	0.118	0.000	0.153	0.258	0.000	-0.044	0.077	0.174
							P -value							
τ							$_{DY,t}$							
M	**0.000**	0.065	0.017	**0.018**	**0.000**	0.064	0.447	0.858	**0.000**	**0.000**	**0.036**	**0.027**	**0.027**	**0.000**
Y	0.875	0.947	0.854	0.905	0.228	0.458	0.374	0.364	0.364	0.267	0.705	0.962	**0.022**	**0.026**
3Y	0.563	0.406	0.764	0.469	0.174	0.154	0.473	0.505	0.916	0.826	0.225	0.337	**0.046**	0.136
5Y	0.584	0.805	0.357	0.975	0.458	0.647	0.362	0.957	0.236	0.017	0.954	0.807	0.237	0.104

Panel C: Panel C reports the beta (β) and p-value of the level of industrial production (IP) from a multiple predictive regression of the various returns (across the time horizons) on the value spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							$\beta_{IP,t}$							
M	**0.000**	0.000	**0.000**	0.000	**0.000**	**0.000**	0.000	0.000	**0.000**	**0.000**	0.000	0.000	**0.000**	**0.000**
Y	-0.026	-0.017	-0.027	0.000	**-0.038**	-0.073	-0.017	-0.027	**-0.064**	**-0.065**	-0.015	-0.018	**-0.048**	**-0.046**
3Y	**-0.036**	0.000	-0.015	0.018	**-0.047**	-0.027	-0.028	**-0.035**	**-0.074**	**-0.095**	0.000	0.018	**-0.073**	**-0.069**
5Y	**-0.025**	0.017	0.000	0.025	**-0.058**	0.000	-0.036	-0.024	**-0.087**	**-0.076**	0.000	0.015	**-0.059**	**-0.068**
τ							**P-value** $_{IP,t}$							
M	**0.014**	0.138	**0.045**	0.873	**0.014**	**0.047**	0.527	0.096	**0.000**	**0.000**	0.246	0.336	**0.000**	**0.000**
Y	0.066	0.438	0.300	0.907	**0.000**	0.064	0.337	0.103	**0.000**	**0.000**	0.447	0.553	**0.000**	**0.000**
3Y	**0.016**	0.876	0.308	0.375	**0.000**	0.397	0.157	**0.014**	**0.000**	**0.000**	0.736	0.773	**0.000**	**0.000**
5Y	**0.000**	0.459	0.957	0.175	**0.000**	0.906	0.000	0.297	**0.000**	**0.000**	0.647	0.147	**0.000**	**0.000**

Panel D: Panel D reports the beta (β) and p-value of the treasury bill rate (Rf) from a multiple predictive regression of the various returns (across the time horizons) on the value spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	**MKT (vw)**	**Growth Decile (ew)**	**Growth Decile (vw)**	**Value Decile (ew)**	**Value Decile (vw)**	**VMG (ew)**	**VMG (vw)**	**Small-Cap (ew)**	**Small-Cap (vw)**	**Large-Cap (ew)**	**Large-Cap (vw)**	**SML (ew)**	**SML (vw)**
τ							β_{Rf_t}							
M	**-2.389**	-1.234	-1.321	-0.049	-1.005	-0.826	0.485	-0.708	-1.003	-1.326	-0.418	0.038	**-1.178**	**-1.367**
Y	-0.024	0.025	-0.025	0.026	-0.016	0.000	0.014	-0.013	-0.036	-0.032	0.017	0.032	**-0.039**	**-0.057**
3Y	-0.033	0.000	-0.035	0.000	-0.035	-0.050	0.017	-0.008	-0.046	-0.036	-0.013	0.000	-0.036	**-0.037**
5Y	-0.016	0.019	-0.012	0.000	-0.044	0.024	-0.036	0.034	-0.034	-0.032	0.019	0.041	**-0.036**	**-0.043**
τ							**P-value** $_{Rf,t}$							
M	**0.000**	0.063	0.182	0.924	0.115	0.257	0.456	0.236	0.146	0.163	0.648	0.925	**0.034**	**0.000**
Y	0.417	0.534	0.501	0.703	0.326	0.925	0.726	0.824	0.436	0.416	0.746	0.453	**0.016**	**0.000**
3Y	0.226	0.820	0.493	0.869	0.272	0.257	0.846	0.905	0.461	0.483	0.691	0.926	0.085	**0.026**
5Y	0.707	0.541	0.824	0.925	0.178	0.826	0.667	0.603	0.336	0.525	0.856	0.547	**0.035**	**0.033**

Panel E: Panel E reports the beta (β) and p-value of the term spread (TERM) from a multiple predictive regression of the various returns (across the time horizons) on the value spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	MKT (vw)	Growth Decile (ew)	Growth Decile (vw)	Value Decile (ew)	Value Decile (vw)	VMG (ew)	VMG (vw)	Small-Cap (ew)	Small-Cap (vw)	Large-Cap (ew)	Large-Cap (vw)	SML (ew)	SML (vw)
τ	$\beta_{TERM\,t}$													
M	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Y	-0.021	0.036	-0.034	0.036	-0.026	-0.036	0.025	-0.037	-0.043	-0.047	0.029	0.046	-0.046	**-0.065**
3Y	-0.016	0.023	-0.024	0.044	0.035	-0.137	0.045	-0.046	-0.027	-0.025	0.016	0.035	-0.046	-0.058
5Y	0.037	0.153	0.126	0.146	-0.025	0.158	-0.102	0.035	0.000	-0.035	0.125	0.235	-0.179	**-0.256**
τ	**P-value** $_{\mathbf{TERM},\,t}$													
M	0.925	0.936	0.925	0.546	0.326	0.690	0.189	0.757	0.789	0.735	0.789	0.680	0.768	0.806
Y	0.646	0.636	0.556	0.795	0.984	0.927	0.678	0.783	0.583	0.525	0.636	0.525	0.136	**0.038**
3Y	0.889	0.747	0.747	0.626	0.427	0.502	0.735	0.609	0.735	0.725	0.746	0.791	0.347	0.351
5Y	0.538	0.057	0.273	0.154	0.707	0.407	0.494	0.809	0.924	0.584	0.195	0.058	0.064	**0.026**

Panel F: Panel F reports the R-squared and no of observations (T) from a multiple predictive regression of the various returns (across the time horizons) on the value spread (S), the dividend yield (DY), the level of industrial production (IP), the treasury bill rate (Rf) and the term premium (TERM).

	MKT (ew)	MKT (vw)	Growth Decile (ew)	Growth Decile (vw)	Value Decile (ew)	Value Decile (vw)	VMG (ew)	VMG (vw)	Small-Cap (ew)	Small-Cap (vw)	Large-Cap (ew)	Large-Cap (vw)	SML (ew)	SML (vw)
τ	$\mathbf{R^2}$													
M	0.183	0.053	0.052	0.000	0.108	0.023	0.000	0.021	0.185	0.136	0.017	0.015	0.074	0.143
Y	0.026	0.002	-0.321	-0.354	0.264	0.067	-0.289	-0.113	0.234	0.127	-0.106	-0.088	0.427	0.539
3Y	0.328	0.169	-0.029	0.034	0.589	0.210	-0.043	-0.021	0.535	0.416	0.158	0.187	0.696	0.704
5Y	0.437	0.432	0.086	0.236	0.603	0.078	-0.174	-0.186	0.587	0.449	0.484	0.437	0.587	0.537